

Questions received regarding the RFP for Hydraulic Models, Water System Master Plans & Major Water Facilities Fees Development and Update
February 15, 2006

Question: We do not have an Oracle license. Can we arrange a workload share with Muni staff so that data management and Oracle database interface stays within city; hence, no need for an additional license purchase?

Follow up response: Could you please clarify what you mean by a workload share?

Follow up question: There are two possible approaches to working with the existing database without requiring the consultant to purchase an Oracle license:

- 1) Export the data contained in the Oracle database to a format that is more commonly used in this type of modeling work. Specifically, we would suggest an ArcView shapefile. At the end of the project, the shapefile, including all modifications made during modeling, would be returned to the City. This is the same process that was used to model the City's sewer system. Alternatively, the data contained in the existing Oracle database could be downloaded into a format such as Access or ArcGIS, which are also easy to integrate into the InfoWater modeling software.
- 2) Link directly to the existing Oracle database. This seems to be the intent of the RFP, though the RFP indicates that the consultant should purchase a license for Oracle Spatial, which is a very expensive proposition. The InfoWater modeling platform is equipped with a "gateway" software utility that is built to interface directly with enterprise software such as the City's Oracle database. To use the City's existing database, the consultant would need to be given access to the City's Oracle server and database. Depending on how the City's server is configured, this may require that the consultant perform some work from the City's office. If remote access to the server is available, this may not be required. Because of the gateway software included with the InfoWater software, the model and the database can be kept synchronized through the direct connection between the two databases (model and Oracle). This option is not so much a "workload" share as it is a sharing of the City's existing Oracle license.

Functionally, these two options are equivalent and will allow the model to be built from the data contained in the City's existing database without requiring the consultant to purchase an Oracle server and license.

Response: Consistent with the RFP specifications, the consultant (and/or any subconsultants) must own or acquire licenses for Oracle software as required for completion of the work associated with this project.

Question: The current Evergreen model is using WaterCAD v4.5 software, and it's noted that the model is maintained by a consulting firm. What's the name of the firm, and how long has the firm been involved with the maintenance?

Response: The current Evergreen model is currently maintained by Schaaf & Wheeler, and has been since initial creation of the model in 1998.

Question: There is no reference to the use of any model and/or software for the recycled water system. When the SBWR program was designed and implemented a few years ago, a hydraulic model must have been used during the design of the non-potable facilities. Many consulting firms were involved in the SBWR program development then. Which firm was specifically responsible for the development of the hydraulic model? Which software was used? Has any consulting firm been involved with the maintenance of the model in the recent past? Will the model be replaced?

Response: The SBWR model was developed by MWH using H2ONet, and has been maintained by City staff. The model will be updated and transferred to InfoWater software as part of this project (H2ONet will no longer be used for this model).

Question: Is San Jose Municipal Water (SJMw) responsible for the planning and engineering of the SBWR system? Who's responsible for operation and maintenance of the system? How is funding for new capital projects being handled? Is SCVWD involved with the SBWR system? How? What about ESD?

Response: The recycled water system is planned and engineered by Muni Water/SBWR (a division within the Environmental Services Department – ESD). Operation and maintenance is performed by the cities of

San Jose, Santa Clara and Milpitas. The City and SCVWD work cooperatively in matters pertaining to the SBWR system.

Question: Does the City have an Information System Flow Diagram that shows all of the databases and how they are interrelated, and would you make it available to the proposing firms? Is the SCADA System for potable water built around an Oracle Database? Is there a separate SCADA system for the non-potable water system, and is it built around an Oracle Database?

Response: The City does not have a system flow diagram available. The potable and non-potable systems each have a separate SCADA system, neither of which is built around an Oracle Database.

Question: What's the budget for this project? How much of the budget is allocated for the development of a hydraulic model of the non-potable water system? How much of the budget is allocated for the potable water systems?

Response: The City is asking for proposed budgets by consulting firms for all tasks associated with this project.

Question: Who will be involved in the review of proposals? Any outside agencies? Any other City departments?

Response: The makeup of the review panel has yet to be determined.

Question: Has SJMW evaluated the various modeling software available in the marketplace and prepared any recommendations leading up the specific requirements outlined in the RFP? If yes, would a copy of such a report be available to the proposing firms?

Response: Current, in-house models are operated using H2ONet and H2OMap. The City will be upgrading these existing software programs to InfoWater to allow for increased integration with GIS-based programs.

Question: When will the interview(s) be held?

Response: The tentative time block for interviews is the week of March 20 – the specific date is to be determined.

Question: How up-to-date is the GIS to assume that all will be created from the GIS?

Response: GIS data is current, and is constantly updated.

Question: What % of billing data is currently geocoded?

Response: Billing data is associated with each respective address, but is not currently linked to GIS.

Question: Can you pull hourly trending data from SCADA on any given time period?

Response: The City will work with the selected consultant to provide available trending data for use in the creation of the model. Six months of historical trending data is available for the potable system, and some historical data for the non-potable (SBWR) system is available through 1998. However, recent changes in the operation of the SBWR system are currently being implemented, the results of which are not reflected in the historical data.

Question: How many hours of an Extended Period Simulation (EPS) are you looking to run? 24-48 hours for operational applications? 7-21 days for EPA IDSE applications?

Response: The City would like the model to run long enough to achieve system stabilization. The consultant should propose whatever is appropriate to achieve this within their submittal.

Question: Are you looking to maintain a 1:1 relationship with the GIS or wanting a slightly skeletonized model?

Response: The City would like to incorporate existing GIS data to create a model which can be used to evaluate the system and achieve accurate results for all analysis functions as described in the RFP. The City is looking for the most cost-effective and efficient model possible.

Question: Are you looking to omit gate valves as break-points on pipes in the model and just use the gate valves as spatial reference for subsequent joins & functionality using InfoWater and Protector?

Response: The City is looking to the consultant to propose the method of determining break-points which would be best suited for both model creation, and for creation of a valve isolation tool as described in Task 4.1.2 and 4.2.2.

Question: Do you have a separate valve point layer from the GIS?

Response: Both the potable system and non-potable system data contains a separate layer for valves.

Question: For a steady state mode, EPS, and Master Plan model, there seem to be more than 4 Demand Sets needed considering the following minimum demand sets and this DOES NOT include other demand sets for Master Plan Planning Periods

1. Avg. day Steady State
2. Max. day Steady State
3. Min. hour Steady State
4. Max. hour Steady State
5. Avg. day EPS
6. Max. day EPS
7. Min. hour EPS
8. Max. hour EPS

Response: The City is looking for input from the consultant regarding creation of an accurate and complete hydraulic model, and will evaluate all options proposed by the consultant.

Question: Task 4.1.4 references running fire flows at any point. Do you mean “any point” with the exception of non-service nodes such as junctions at the suction and discharge sides of pumps where no services or hydrants actually exist?

Response: The hydraulic model should allow the user to define any point on a potable system pipe to conduct a fire flow analysis. Analysis at a pump will not be required.

Question: Should the calibration day for EPS correlate with records of high THMs and HAAs also (in addition to the maximum day demand)?

Response: The consultant is encouraged to propose any approach deemed appropriate for model creation, which the City will consider during proposal evaluation.

Question: Is 1 day training going to suffice? Typically, a minimum of 2-days is useful.

Response: One day of staff training is expected by the City. Note that Task 12.3 includes additional meetings to be held at the City’s discretion. If the consultant feels 1 day of training would be insufficient, the consultant is free to propose any additional training as a supplemental option which will be evaluated by the City.

Question: What specific uses of ArcIMS, ArcSDE, Oracle Spatial, and ArcObjects by the selected Consultant do you anticipate during the course of this project?

Response: ArcIMS will not be utilized by the selected Consultant for this project. ArcSDE will be utilized as necessary in order to access the potable system’s GIS data which resides in Oracle Spatial. Oracle Spatial will ONLY be used for the development of the Potable System Model. ArcObjects will be utilized by the selected consultant as necessary for the development of the models.

Question: In Task 4.1.1, could you elaborate on your statement that you want the models to “be managed in an Oracle Spatial Relational Database”? What is the objective?

Response: The potable system GIS data resides in an Oracle Spatial Database. The non-potable system model resides in an ESRI Personal Geodatabase. The City would like it to remain this way for the purposes of model development. The objective is to keep the hydraulic models consistent with the City’s GIS data formats.

Question: Under Task 4.1.1, is the GIS information for pipes and tanks up to date or will some of the facilities need to be added manually?

Response: GIS data for both potable and recycled systems is current, and will not require manual addition of any facilities.

Question: Under Task 4.1.2, are you expecting the Consultant to develop a specialized tool or set up and use the capabilities of the selected modeling software to accomplish this task?

Response: The City is looking for input from the consultant regarding the method of creating an identification tool as described. If the existing capabilities of the InfoWater software are such that desired data cannot be collected without development of a specialized tool, please provide the City with the proposed method of additional work necessary to accomplish this task.

Question: Under Task 4.1.4, do you want the Consultant to actually create a hydrant curve and output for all system pressures during a fire analysis for each hydrant in the system or just provide the ability in the model to easily do so into the desired format?

Response: When running a fire flow analysis at a designated point in the system, the output should include a hydrant curve and data report for the designated point only. Additionally, the fire flow analysis should, by default, provide a system evaluation which indicates pressures at nodes throughout the system.

Question: Does the City's GIS database include all hydrants and the piping from the distribution system to each hydrant?

Response: The GIS database includes general locations of all hydrants on the potable distribution system. Hydrant laterals are not included in GIS at this time. Please note that fire flow analysis will not be required at hydrants, only along the mainline piping.

Question: Task 4.3 could be highly variable in terms of level of effort for the Consultant. Can you provide a fixed number of hours to assume for the purposes of our proposal fee estimate? Or can we exclude that from our fee proposal and assume it will be a variable amount depending on the City's requests during the course of the project?

Response: The City would like the consultants to provide a general fee amount for time associated with this task in the form of an hourly rate charge list.

Question: Under Tasks 5.1.1 and 5.1.2, did you want 10 to 20 fire flow tests for each service area or 10 to 20 tests total for the project? If 10 to 20 tests per service area, should the Consultant assume that they will be doing tests for the Edenvale and the Coyote Valley service areas or will the City be doing that along with the modeling work of Task 4.3?

Response: As stated, the task should include 10-20 fire flow tests for each service area. Consultants should assume that fire flow tests shall be performed in all four potable service areas, with actual model calibration for the Edenvale and Coyote Valley models to be done by the City.

Question: Can we assume that there is operational and reliable SCADA facilities and data for all service areas, with at least hourly monitoring and recording of all tank levels, pump status and water supply (at least hourly volumes or flowrates from wells and supply connections)?

Response: Six months of this historical information is available for the potable system. Some information for the non-potable system is available through 1998.

Question: For Task 8.1.1, what are the intermediate planning horizons?

Response: Land use planning for buildout will be provided for each service area, along with a schedule of proposed development. Specific intermediate horizons are to be determined, but for planning purposes the Consultant can assume that intermediate development schedules will be provided for every 5 year point through the anticipated buildout date.

Question: Will the City or the Consultant be doing the model calibration, future system modeling, and future system planning for the Edenvale and Coyote Valley service areas?

Response: The City will be performing the model calibration and future system modeling for the Edenvale and Coyote Valley service areas. The City will provide information necessary for the consultant to complete the Capital Improvements Plan and Major Water Facilities Fee schedule for the Edenvale and Coyote Valley service areas.

Question: Under Task 9.3, do you want the training to focus on the use of the model or on the use of the software as well? One day is probably not sufficient if both model and software training are desired.

Response: Training shall cover the use of the model, as well as the use of the software required to perform the different functions of the model as developed in the project. At this time, training is anticipated to occur during one day. If the consultant feels one day of training would be insufficient, the consultant is free to propose any additional training as a supplemental option which will be evaluated by the City.

Question: Is the City currently required to do water quality sampling and testing under the Stage 1 Disinfection Byproducts Rule?

Response: Yes.

Question: Are all the wells equipped with chlorinators? If not, how many?

Response: None of the Muni Water wells are equipped with chlorinators.

Question: Will we be given password/permission to access your Oracle Spatial data base?

Response: The consultant will be given sufficient access to the Oracle Spatial database as required for the project, or City will provide data to consultant by other means in-lieu of providing access.

Question: What is the purpose of modeling the SBWR system? This is a new system that was modeled extensively for that work. Is something deficient in the modeling?

Response: All of the City's existing hydraulic models, including the SBWR system model, will be updated, expanded, and transferred to InfoWater software as part of this project.

Question: Can you provide proposers with a representative two square block sample of the data base as a shapefile? This would help us to understand data manipulation requirements.

Response: See page 6 for sample layout of the non-potable system.

Question: Task 2.3 – What happens if we determine that the City's GIS information is not sufficient to meet project objectives?

Response: The City's existing GIS database is current and representative of the system.

Question: Task 3.2.2 – Do you have an estimate of the number of users that need to be entered into the system (i.e. how many customer accounts do you expect us to geocode?)

Response: There are currently approximately 25,300 potable water connections and 500 recycled water connections.

Question: Task 4.3 – Does this apply to the potable or non potable systems? Can you suggest an allowance (people-hours) for each proposer to assume when budgeting the work?

Response: The non-potable (SBWR) model will be one, all-inclusive model of the entire SBWR system (including all portions of the system within the cities of San Jose, Santa Clara and Milpitas). Task 4.3 is specific to the potable models for the Edenvale and Coyote service areas. The City would like the consultants to provide a general fee amount for time associated with this task in the form of an hourly rate charge list.

Question: Task 8.2.1 – Is there a current recycled water marketing study and/or program that establishes new markets or estimates of recycled water demands? What is our assumed limit of service for Muni/SBWR?

Response: Future planning information included within the non-potable model (including demands) shall be consistent with the 2005 Urban Water Management Plans of San Jose Water Company and the cities of San Jose, Santa Clara and Milpitas. The Muni Water potable system model shall include all service areas as defined in Chapter 15.08 of the City of San Jose Municipal Code. The SBWR system service area shall include the cities of San Jose, Santa Clara and Milpitas.


Recycled Water Distribution System

Map By:
City of San José
Environmental Services Department
South Bay Water Recycling Program

Map Date:
February 14, 2006



Map Legend

-  Recycled Water Meters
-  Anodes
-  Air Relief Valves
-  Blowoff Valves
-  Isolation Valves
-  Recycled Water Pipelines

